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S. cynosuroides, Willd., than as a distinct species. The characters based upon the spikelets alone are not sufficient to separate them.

The spikelets represented in Figures 1 and 2 of Plate xxxvi. were taken from a specimen of *S. cynosuroides* collected at the outlet of Moosehead Lake, Maine, by Messrs A. H. and C. E. Smith in 1868. The spikes of the plant are unusually long peduncled and very loosely flowered, but that it is an abnormal growth is well shown by the spikelets represented.

Figures 3, 4 and 5 were drawn from spikelets of a specimen in the herbarium of Mr. Wm. M. Canby, collected at Atlantic City, New Jersey. In habit the plant was like *S. polystachya.* Figure 5 represents a double spikelet which has two upper outer glumes with but a single lower one. Nearly all degrees of cohesion were to be found in different spikelets on the plant.

Figures 6, 7, 8 and 9 illustrate in detail a two-flowered spikelet taken from a specimen of *S. cynosuroides* collected in Oregon by E. Hall. Most of the spikelets were normal, but all degrees in the development of a second floret were exhibited by others, the one here illustrated being the most complete. In some the opposing edges of the pales of the two flowers were united for nearly their entire length. Fig. 6 shows the 2-flowered spikelet complete. Fig. 7 exhibits the outer glumes. Fig. 8 shows the two florets removed from the outer glumes. Fig. 9 shows the florets separated.

New Western Compositæ.

By Edward Lee Greene.

Brickellia Cedrosensis.—A low shrub, with ascending, leafy branchlets bearing usually a solitary head; larger leaves a half-inch long, triangular ovate, coarsely and sharply toothed, on short petioles; those of the branchlets narrower and mostly entire, all roughish pubescent; heads 12–18-flowered; involucral scales acute; akenes smooth; pappus finely barbellate.

Collected on the Cedros Islands many years since by Dr. Veitch, and preserved in the herbarium of the California Academy. The species is allied to *B. frutescens*, Gray, of the main land, north-east of the islands, which has entire, veinless leaves, and heads with more numerous flowers.

Bæria carnosa.—Simple, or more or less branched from the base; the root somewhat fusiform-thickened, but strictly annual; stems a span high, slender but wiry, purple, and sparsely clothed with rather webby, white hairs; leaves wholly glabrous, narrowly linear, subterete and, with the involucres, thick and succulent; involucres campanulate, their large fleshy scales marked with a prominent, keel-like midrib; akenes roughish; pappus of 5 ovate, acuminate, chaffy scales which taper into a long slender awn.

Collected by the writer on the border of a salt marsh at Vallejo, April 15th, 1883. A most remarkable species, as to its succulent herbage, recalling certain similarly fleshy, maritime species in other genera of compositæ, as, for example, *Layia carnosa*, H. & A.

Lagophylla congesta.—Near *L. ramosissima*, but the stouter stem usually simple; heads larger and numerous, in dense, glomerate clusters; floral leaves and involucral scales very villous, and beset with short-stipitate, or more commonly, quite sessile glands; akenes twice the size of those of other known species, and of a light grey; chaff of the receptacle united to the middle, thus forming a cup.

This interesting plant was collected by Dr. Kellogg in Mendocino County, Cal., as long ago as August, 1867, and is now in July, 1883, brought in from Mt. Yamulpais, near San Francisco, by that most diligent gatherer of rare Californian plants, Mrs. Kate Curran. Resembling *L. glandulosa* in being a glandular species, if these glands were overlooked; and, if it had a branching mode of growth, it would pass for a ranker *L. ramosissima.*

SENECIO CLEVELANDI.—Glabrous and glaucous; stem rather stout, 1½–2 feet high, few-leaved above and bearing numerous middle-sized, paniculate-corymbose heads; lower leaves numerous, rather succulent, ovate-oblong, entire, 2–3 inches long, tapering to long petioles; involucre broad, sparingly calyculate, its scales with lanceolate, acuminate, green tips; rays deep yellow; akenes short and small, prominently 4- or 5- angled.

Indian Valley, Lake County, Cal., D. Cleveland.

The following species, from another district, resembles this in foliage, but not otherwise, namely :

SENECIO LAYNEÆ.—Two feet high, glabrous throughout, strict and simple leaves mostly radical, linear lanceolate, entire, 3–4 lines wide, an inch or two long, on petioles of nearly equal length; the few cauline ones similar, though less obviously petiolate heads 5–7, corymbose, all but the central one on peduncles 2–3 inches long, large and showy; involucre campanulate, many-flowered, more than ½ inch high, naked at base; rays 7–10, oblong-linear, ¾ inch long, orange-yellow; the merely convex style-tips bearing 3 or 4 conspicuous central bristles, and numerous shorter ones toward the circumference.

El Dorado County, Cal., on Sweetwater Creek, not far from Folsom; collected in May, 1883, by the very zealous and efficient Mrs. Kate Layne-Curran, to whom I gladly dedicate it. It is a near relative of the rare *S. Greenei*, Gray, thus far collected only by the writer, and that seven years ago, in the neighborhood of the geysers, in Sonoma County.

SENECIO ACTINELLA.—Acaulescent, at first arachnoid-woolly; leaves all radical, obovate to oblanceolate, spatulate, their margins strongly crenate-dentate, an inch or two long, including the broad petiole, and ½ inch or more in breadth, coriaceous, veinless, at length glabrate, and persistent through the winter; scape solitary, 6–10 inches high, bearing a single large head; involucre campanulate, ½ inch high, the calyculate scales few and wrapped in wool; rays 9–12, narrow, pale yellow; style-tips bristly-fringed.

Rocky woods in the northern part of Arizona, near Flagstaff; collected by H. H. Rusby, June, 1883. A fine new species, nearest to *S. canus*, from which it is distinguished by its crenate-toothed leaves, strictly monocephalous scapes, and large heads.

SENECIO ARIZONICUS.—Slightly webby-woolly at first, at length glabrate; leaves mostly radical, numerous, and of a fleshy texture, ovate-oblong, obtuse, often a little cordate at base, strongly cuspidate-toothed, 1½ inches broad, 3 inches long, on petioles of almost equal length; stem 1½ feet high, slender, leafless, or with a few large and small bracts; corymb lax; heads middle-sized, on slender peduncles; involucres with a few almost filiform calyculate scales or bracts at base; rays 9–12, yellow.

Lynx Creek, in Northern Arizona, May 31st, 1883; collected by H. H. Rusby.

MICROSERIS ACUMINATA.—Near *M. Bigelovii*, but larger, the scapes more than a foot high, and rather stout; leaves pinnately parted into numerous, narrowly linear division; akenes only slightly contracted at summit, ¼ inch long; pappus ¾ inch long, consisting of 5 linear-lanceolate scales, each tapering very gradually into a short, slender awn.

Collected, in a few depauperate specimens, near Vallejo, in April 1883; and also, at about the same date, in the Sacramento Valley, by Mrs. Kate Curran, her specimens being of a strong, luxuriant growth. Dr. Gray informs me that it was even long ago collected sparingly by Bigelow, on Mark West's Creek, and that it has been referred, first to *M. Douglassii* and later to *M. Bigelovii.*

TROXIMON HETEROPHYLLUM.—This will apparently have to be the name of the North American plant which has been for some years past called *T. Chilense*, Gray. (Proc. Am. Acad., ix., 216, and Bot. Cal., i., 439.) The Chilian plant, for which Dr. Gray's specific name will be retained, differs in having considerably larger akenes, which are always all alike in the same head, and a shorter stipe to the pappus.

The North American plant runs into varieties so remarkable that, on two of them, so acute and able a botanist as Nuttall founded genera; and I even now doubt if they do not merit the rank of species. However, since my venerated friend Dr. Gray (who, by the way, has lately, and independently of my fresh specimens and notes, reached also the conclusion that our species is distinct from the Chilian) regards them as mere varieties, I here so place them; namely:

var. CRYPTOPLEURA.—Outer akenes nearly globose inflated and hardly striate, the inner of normal thickness and also barely striate, not at all winged. This is the *Cryptopleura Californica*, Nutt., and *Macrorhyncus Californicus*, Torr. & Gray. Although hitherto accounted very rare, and thought to be perhaps a merely abnormal state not likely to recur, I have this year found plenty of it in two patches a quarter of a mile distant from each other, though both within the limits of the town of Berkeley.

var. KYMAPLEURA.—Outer akenes with broad and strongly and beautifully undulated wings, the inner merely striate. This is *Kymapleura heterophylla*, Nutt., and also *Macrorhyncus heterophyllus*, of the same author. It is the most common form of the species in the central part of California.

Besides these striking varieties, which do not show any signs of running together, there are other forms, namely, one with akenes all alike, and none of them much ribbed, another with the outer akenes ribbed (not corky-winged) and very hirsute.

The species should be collected abundantly in all localities where it occurs, and the specimens diligently compared. I regard it as an interesting subject of future investigation.

New Species of Fungi.

By J. B. ELLIS and B. M. EVERHART.

DIAPORTHE (VALSA) ELLISII, Rehm (*in lit.*).—Stroma cortical, without any circumscribing line; perithecia numerous (15–20), $.5^{\text{mm.}}$ in diameter, crowded, subcircinate, raising the bark into small pustules, through the centre of which bursts the brown convex disk pierced around its margin by the black, obtuse, dot-like ostiola; asci-subclavate, 57x8μ; sporidia biseriate or overlapping, narrowly elliptical, 4-nucleate, and often slightly constricted in the middle, 11–15x3.5–5.5μ.

With a *Cytispora*, the spores of which are oblong, hyaline, 4-nucleate, 8–11x2–2.5μ and issue in an orange-colored mass.

Closely allied to *Diaporthe carpinicola*, Fkl., and *Valsa Carpini*, Fr.

On dead branches of *Carpinus Americana*. West Chester, Pa. June, 1882. E. H. J. & G. No. 372.

VALSA LASIOSTOMA.—Perithecia circinating, $.33–.5^{\text{mm.}}$ in diameter, globose, and tuberculose-roughened, lying on the suface of the inner bark, or slightly bedded in it, their long (100–150μ), slender, cylindrical, decumbent necks converging and piercing the epidermis in a group, but not united in a disk; asci (spore-bearing part) 35–40x4–5μ; sporidia cylindrical, hyaline, nearly straight, 5–6 x 1.5–2μ.

The ostiola are slightly swollen above, and, with the exception of the bare, black, obtuse tips, are covered with an olive-brown pubescence as in *Sphæria barbirostris*, Dufour, from which this scarcely differs in any respect except in its circinate perithecia.

On decaying white oak limbs lying on the ground. Newfield, N. J. March, 1883.

CUCURBITARIA COREMÆ.—Perithecia at first subcuticular, but finally throwing off the epidermis, ovate, black, rough, $.16–.33^{\text{mm.}}$ in diameter, ostiola broadly papilliform on obtuse conic; asci cylindrical, 150x15μ; sporidia uniseriate and oblique or partly biseriate, elliptical or oblong-elliptical, yellow at first, becoming finally deep brown, about 7-septate, with some partial longitudinal septa, and mostly constricted in the middle, 20–25x7–9μ.

On dead branches of *Corema Conradii*. Willow Grove, N. J., November, 1883.

LOPHIOSTOMA STENOSTOMUM.—Perithecia scattered, globose, $.25^{\text{mm.}}$ in diameter, covered by the fibres of the bark, which is pierced by the narrow, slightly compressed ostiolum; asci clavate-cylindrical, 75–90x6–7μ; paraphyses filiform, abundant; sporidia biseriate, fusiform, slightly curved, yellowish, nucleate and uniseptate at first, becoming 3-septate and more or less constricted at the septa, 18–22x 3–3.5μ.

Accompanied by a *Phoma* with small, subglobose spores in perithecia scarcely different from the ascigerous ones except in wanting